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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/662,068	09/14/2000	Gerry R. Talbot	0939A-036911US	1454

7590

02/27/2003

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EXAMINER

DINH, NGOC V

ART UNIT

PAPER NUMBER

2187

DATE MAILED: 02/27/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/662,068

Applicant(s)

TALBOT ET AL.

Examiner

NGOC V DINH

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _____ MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 July 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 53-67 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 53-67 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 July 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ 6) ☐ Other: _____

DETAILED ACTION

Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim 55-67 is rejected under 35 U.S.C 103(b) as being unpatentable over Zenk et al [U.S 4,590,586].

1. As per claims 53-54:

Zenk teaches in a data processing system [fig. 1a-1b], a method for ordering [e.g., prioritizing] a plurality of memory access requests, the method comprising: accepting the plurality of memory access requests; ordering the plurality of memory access requests, wherein a first request of the plurality of memory access requests to an available memory location [e.g. available memory banks] precedes a second request of the plurality of memory access requests to an unavailable memory location [unavailability memory banks; col. 4, lines 50-60]; and after the ordering, servicing the first request [col. 4, lines 16-60; col. 11, line 65 to col. 12, line 33; col. 18, lines 50-60; col. 32, lines 56-65].

2. As per claim 55:

Zenk teaches in a data processing system, a method for reordering [subsequent prioritizations; col. 12, lines 30-35] at least three memory access requests, the method comprising: accepting the memory access requests; selecting at least two of the at least three memory access requests, the at least two having available memory locations; and scheduling at least one of the at least two of the at least three memory access requests [col. 4, lines 16-60; col. 11, line 65 to col. 12, line 33; col. 18, lines 50-60; col. 32, lines 56-65].

3. As per claims 56-57:

Zenk teaches in a computer system, a method for processing a plurality of memory access requests, the method comprising: receiving said plurality of memory access requests by a queue [84, fig. 1b, 2; col. 14, lines 57-65]; reordering [subsequent prioritizations; col. 12, lines 30-35] said plurality of memory access requests in the queue based on the availability of target memory addresses [e.g., available memory banks], wherein a target memory address is associated with a memory access request of the plurality of memory access requests; after said reordering, servicing said plurality of memory access requests [col. 4, lines 16-60; col. 11, line 65 to col. 12, line 33; col. 18, lines 50-60; col. 32, lines 56-65]; reordering provides for at least two memory access requests with available target memory address.

4. As per claim 58-60:

Zenk teaches in a computer system, a method for processing a plurality of memory access requests is done sequentially [col. 37, lines 30-35]; queue is a priority queue [84, 52,56,68,72, fig. 2; col. 35-45], wherein a first memory access requests with higher priority than a second memory access request [e.g., competing requests, col. 6, lines 10-15] is executed before second memory access request; reordering results in a queue having a first memory access request with an available target memory address preceding a second memory access request with an un available target memory address [col. 19, lines 35-50; col. 23, lines 15-25; col. 25 line 1 to col. 26 line 65; col. 27-28].

5. As per claim 61:

Zenk teaches, after said servicing of said plurality of memory access requests, returning results of said servicing according to a received order [e.g., FIFO] of said plurality of memory access requests by said queue [col. 14, col. 57-68].

6. As per claims 62-63:

Zenk teaches a data processing system that reorders memory access request [subsequent prioritizations; col. 12, lines 30-35], the system comprising: a request buffer for holding a plurality of memory access requests [84, fig. 1b] received in a first order; an availability determiner [priority logics, 52,56,68,72, fig. 2]; for

determining availability of memory locations requested by said plurality of memory access requests; and a reordering unit responsive to said availability determiner for arranging said plurality of memory access requests in a second order based on the availability of memory locations, wherein a first memory request of said plurality of memory access requests with an available memory location precedes a second memory request of said plurality of memory access requests with an unavailable memory location; the method of claim 62 further comprising an execution unit for 2 executing said plurality of memory access requests based on said second order [col. 4, lines 55-60; col. 11, lines 35-45; col. 12, lines 30-35; col. 14, lines 57-68; col. 19, lines 40-55].

7. As per claims 64-65:

Zenk teaches a priority queue [priority logics, 52,56,68,72, fig. 2] in a computer system for determining an execution order for executing a plurality of memory access requests, the priority queue comprising: a memory unit for storing said plurality of memory access requests in a receiving order; and an ordering module for determining said execution order from said receiving order, said execution order is based on availability of target memory addresses associated with said plurality of memory access requests order; plurality of memory access requests comprises at least three memory access requests [col. 4, lines 55-60; col. 11, lines 35-45; col. 12, lines 30-35; col. 14, lines 57-68; col. 19, lines 40-55].

8. As per claim 67:

Zenk teaches a results ordering module for returning results of said execution unit according to said receiving order [col. 14, lines 60-65].

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ngoc Dinh whose telephone number is (703) 305-3023. The examiner can normally be reached on Monday-Friday 8:30 AM-5:00 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Do H. Yoo, can be reached on (703) 308-4908. The fax phone numbers

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for the organization where this application or proceeding is assigned are (703) 746-7239 for regular communications and (703) 746-7238 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-3900.

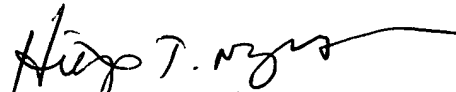


NGOC DINH

Patent Examiner

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February 12, 2003



HIEP T. NGUYEN
PRIMARY EXAMINER